

140. (new) A process as set forth in claim 139 wherein said supporting structure comprises a non-brittle material that has a yield strength of at least about 100 MPa.

141. (new) A process as set forth in claim 140 wherein said supporting structure comprises a metal sponge containing at least about 15% by weight non-copper metal and at least about 10% by weight copper.

142. (new) A process as set forth in claim 140 wherein the active phase at the surface of said catalyst comprises at least about 50% by weight copper.

143. (new) A process as set forth in claim 142 wherein said active phase contains less than about 1% by weight of a metal oxide other than cuprous oxide.

144. (new) A process as set forth in claim 142 wherein said active phase contains less than about 1% by weight of cuprous oxide.

145. (new) A process as set forth in claim 142 wherein said active phase contains at least about 1% by weight of a supplemental metal selected from the group consisting of chromium, titanium, niobium, tantalum, zirconium, vanadium, molybdenum, manganese, tungsten, cobalt, nickel, bismuth, tin, antimony, lead, germanium, and mixtures thereof.

146. (new) A process as set forth in claim 140 wherein said supporting structure comprises a metal containing at least about 10% by weight non-copper metal.

147. (new) A process as set forth in claim 146 wherein said catalyst comprises a metal sponge.

148. (new) A process according to claim 146, wherein said non-copper metal comprises metal having a reduction potential which is less than about +343 mVolts vs. NHE.

149. (new) A process according to claim 146, wherein said metal support comprises at least about 10% by weight of a non-copper metal selected from the group consisting of nickel, zinc, tin, cobalt, iron, and combinations thereof.

150. (new) A process as set forth in claim 146 wherein said catalyst comprises a surface stratum comprising said active phase, said surface stratum containing between about 0.005 and about 0.5 grams of copper per gram of said supporting structure.

151. (new) A process as set forth in claim 146 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

152. (new) A process as set forth in claim 146 wherein said catalyst comprises a particulate catalyst, the particles of which have the structure of claim 140.

153. (new) A process as set forth in claim 140 wherein the catalyst comprises a metal sponge and said supporting structure comprises at least about 10% by weight non-copper metal and from about 2% to about 30% by weight copper.

154. (new) A process as set forth in claim 153 wherein said catalyst comprises a surface stratum comprising said active phase, said surface stratum containing between about 0.005 and about 0.5 grams of copper per gram of said supporting structure.

155. (new) A process as set forth in claim 153 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

156. (new) A process as set forth in claim 153 wherein said catalyst comprises a particulate catalyst, the particles of which have the structure of claim 140.

157. (new) A process as set forth in claim 153, wherein the supporting structure of said metal sponge comprises at least about 50% by weight non-copper metal.

158. (new) A process according to claim 157, wherein said non-copper metal comprises metal having a reduction potential which is less than about +343 mVolts vs. NHE.

159. (new) A process according to claim 158, wherein said supporting structure comprises at least about 50% by weight of a non-copper metal selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

160. (new) A process according to claim 159, wherein said supporting structure comprises at least about 50% nickel.

161. (new) A process according to claim 159, wherein said supporting structure comprises at least about 50% cobalt.

162. (new) A process as set forth in claim 140 wherein said catalyst has a substantially homogeneous structure containing at least about 15% by weight non-copper metal and at least about 10% by weight copper.

163. (new) A process as set forth in claim 140 wherein said catalyst comprises a monophasic alloy containing at least about 15% by weight non-copper metal and at least about 10% by weight copper.

164. (new) A process as set forth in claim 140 wherein said catalyst has a heterogeneous structure comprising a support comprising a metal containing at least about 10% by weight non-

copper metal and a surface active phase containing at least about 50% by weight copper.

165. (new) A process as set forth in claim 140 wherein said supporting structure comprises a metal sponge containing at least about 15% by weight non-copper metal and at least about 10% by weight copper.

166. (new) A process as set forth in claim 140 wherein said catalyst comprises a surface stratum comprising said active phase, said surface stratum containing between about 0.005 and about 0.5 grams of copper per gram of said supporting structure.

167. (new) A process as set forth in claim 140 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

168. (new) A process as set forth in claim 140 wherein said catalyst comprises a particulate catalyst.